IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.:	10/679,260		
In re:	Cheng	Art Unit:	3754
Filed:	10/07/2003	Examiner:	Hook, James F.
For:	A HOSE FOR CONVEYING FLUIDS CONTAINING HYDROGEN		
Docket No.:	65,523-007 (60,680-891)	Conf. No.:	3121

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

REPLY BRIEF PURSUANT TO 37 C.F.R. § 41.41

Dear Sir:

Appellant submits this Reply Brief for consideration by the Board of Patent Appeals and Interferences pursuant to 37 C.F.R. § 41.41 The Patent and Trademark Office is hereby authorized to charge any fees required or to credit any overpayment of fees to Deposit Account No. 04-2223.

CERTIFICATE OF TRANSMISSION VIA EFS-WEB

I hereby certify that this Reply Brief is being transmitted to the United States Patent and Trademark Office via the Office's electronic filing system EFS-Web addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the 12th day of August, 2008.

/Alesia A. Mungons/
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TABLE OF CONTENTS

Page

I. ARGUMENTS 1

A. Rejection of Claim 1-6 Under 35 U.S.C. § 103(a) 1

1. Rejection of Claims 1, 3, and 4 1

2. Rejection of Claim 2 2

3. Rejection of Claims 5-6 2

B. Rejection of Claims 7-12 Under 35 U.S.C. § 103(a) 2

1. Rejection of Claims 7-12 Over Ostrander et al. in View of Fukushi and Hibino et al. 2

2. Rejection of Claims 7-12 Over Hibino et al. in View of Ostrander et al. 3

TABLE OF AUTHORITIES

Page(s)

Federal Statutes

35 U.S.C. § 103 1-5

Federal Cases

In re Grasselli, 713 F.2d 731, 218 USPQ 769 (Fed. Cir. 1983). 4

KSR International Co. v. Teleflex, Inc, 127 S. Ct. 1727, 167 L.E.2d 705, 82 USPQ2d 1385 (2007). 1

W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). 4

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I. ARGUMENTS

Appellant writes to address issues raised in the "Response to Argument" section of the Examiner's Answer.

A. Rejection of Claims 1-6 Under 35 U.S.C. § 103(a)

1. Rejection of Claims 1, 3, and 4

Claims 1, 3, and 4 stand rejected as unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 6,240,970 ("Ostrander et al.") in view of U.S. Patent Publication No. U.S. 2003/0087053-A1 ("Fukushi") and U.S. Patent No. 5,937,911 ("Kodama et al.").

Independent claim 1 recites: "A hydrogen feeding hose for a fuel cell, the hose comprising three hydrogen barrier layers which are from the inside towards the outside: a layer comprising a fluorine-based thermoplastic material; a layer comprising a vinyl ethylene alcohol; and a layer comprising a polybutylene terephthalate."

Appellant relies on its Appeal Brief setting forth its argument that the rejection of claims 1, 3, and 4 under 35 U.S.C. § 103(a) is improper because one of ordinary skill in the art would not seek to combine the teachings of Ostrander and Fukushi and furthermore, that their combination does not yield a predictable result.

With respect to the failure of Ostrander et al. to teach a hose with an outer PBT layer, the Examiner cites Kodama et al. and argues that it would have been obvious to further modify Ostrander et al. to include an outer layer made from PBT since it would yield a predictable result. Examiner's Answer, page 13. Appellant respectfully submits that while Kodama et al. discloses a number of different materials, Kodama et al. never teaches, discloses, or suggests the use of PBT in combination with EVOH. The failure to acknowledge the combination of PBT with EVOH supports Appellant's argument that the substitution of PBT for the layer adjacent the EVOH layer was not merely predictable such that one of ordinary skill in the art would have simply substituted PBT for the outer layer, especially considering that there are no references that disclose the combination. Appellant again submits that *KSR* recognizes that if the invention "is more than the predictable use of prior art elements according to their established functions," then a combination of elements is not obvious.

Because one of ordinary skill in the art would not be motivated to combine the teachings of Ostrander et al., Fukushi, and Kodama et al. and there is insufficient evidence to support that the claimed invention is a mere predictable result of combining these references, especially considering that there is no reference that suggests the desirability and/or compatibility of all three layers of Appellant's claimed invention, Appellant respectfully submits that the rejection of claim 1 under 35 U.S.C. § 103(a) is improper. Accordingly, Appellant requests that the rejection be overturned.

2. Rejection of Claim 2

Claim 2 depends from independent claim 1 and therefore incorporates all of the limitations recited in claim 1. For the reasons stated hereinabove in Section I.A.1, therefore, Appellant submits that the rejection of claim 2 under 35 U.S.C. § 103(a) is improper and requests that the rejection be overturned.

3. Rejection of Claims 5 and 6

Claims 5 and 6 depend from independent claim 1 and therefore incorporate all of the limitations recited in claim 1. For the reasons stated hereinabove in Section I.A.1, therefore, Appellant submits that the rejection of claims 5-6 under 35 U.S.C. § 103(a) is improper and requests that the rejection be overturned.

B. Rejection of Claims 7-12 Under 35 U.S.C. § 103(a)

1. Rejection of Claims 7-12 Over Ostrander et al. in View of Fukushi and Hibino et a.

Claims 7-12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ostrander et al. in view of Fukushi and Hibino et al. Independent claim 7 recites: "A fuel cell assembly, comprising: a source of fuel, said fuel consisting of hydrogen; a fuel cell; and a hose transporting said fuel between said source and said fuel cell, said hose comprising three hydrogen barrier layers which are from the inside towards the outside: a layer comprising a fluorine-based thermoplastic material; a layer comprising a vinyl ethylene alcohol; and a layer comprising a polybutylene terephthalate."

Appellant relies on its Appeal Brief setting forth its argument that the rejection of claims 7-12 under 35 U.S.C. § 103(a) is improper because one of ordinary skill in the art would not seek to combine the teachings of Ostrander and Fukushi and furthermore, that their combination does not yield a predictable result.

Because one of ordinary skill in the art would not be motivated to combine Ostrander et al., Fukushi et al, and Hibino et al, Appellant further submits that the rejection of claim 7 under 35 U.S.C. § 103(a) is improper and requests that the rejection be overturned.

Claims 8-12 depend from independent claim 7 and therefore incorporate all of the limitations recited in claim 7. For all of the reasons stated hereinabove in Section I.B, therefore, Appellant submits that the rejection of claims 8-12 under 35 U.S.C. § 103(a) is improper and requests that the rejection be overturned.

2. Rejection of Claims 7-12 Over Hibino et al. in View of Ostrander et al.

Claims 7-12 have also been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hibino et al. in view of Ostrander et al. The Examiner acknowledges that Hibino et al. fails to disclose (1) the use of EVOH as an intermediate barrier layer; (2) using PVDF as one of the fluororesin used for the inner layer; and (3) providing a polyurethane adhesive layer. The Examiner asserts that it would have been obvious to modify the intermediate barrier layer of Hibino by substituting EVOH to yield a predictable result. The Examiner further states that "per the teachings of Ostrander, metal can be included in the barrier layer, and would not teach away from the use of a metal in a barrier layer." Examiner's Answer, page 19. However, Appellant respectfully submits that Appellant's claimed invention does not include a metal barrier as required in the base reference Hibino et al. Accordingly whether or not Ostrander et al. may be compatible with a metal barrier layer is immaterial as to whether one of ordinary skill in the art would modify Hibino et al. (as the base reference) to remove the metal barrier layer.

The base reference Hibino et al. clearly requires a metal barrier layer. In particular, Hibino et al. discloses that the use of a metal barrier layer is an essential feature of the hose. For example, Hibino et al. specifically notes that organic materials (e.g., fluororesins) may not be able to satisfy requirements for fluid impermeability and that processing organic materials may be expensive and undesirable (*see* paragraph [0005]). Hibino et al. thus requires that the hose have a barrier layer of metal, such metal serving to ensure that the hose have a high fluid impermeability. (*see* paragraph [0006]).

"It is improper to combine references where the references teach away from their combination." MPEP § 2145 (citing *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983)). Hibino et al. clearly teaches away from modification of a metal barrier layer to a non-metal, organic layer as described above. "A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention." MPEP § 2141.02 citing (*W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)). When considered in its entirety, Hibino et al. criticizes or discredits the use of non-metal barrier layers in multi-layer hoses and constitutes a teaching away from any combination that would include a non-metal barrier layer. Accordingly, one of ordinary skill in the art would not be motivated to modify Hibino et al. to remove the metal barrier layer and replace it with an EVOH layer, as such modification would go against the express teaching of Hibino et al.

Because one of ordinary skill in the art would not combine Hibino et al. and Ostrander et al. and the combination would not yield a predictable result, Appellant submits that the rejection of claim 7 under 35 U.S.C. § 103(a) is improper and requests that the rejection be overturned.

Claims 8-12 depend from independent claim 7 and therefore incorporate all of the limitations recited in claim 7. For the reasons stated hereinabove in Section I.B, therefore, Appellant submits that the rejection of claims 8-12 under 35 U.S.C. § 103(a) is improper and requests that the rejection be overturned.

Respectfully submitted,

Date: August 12, 2008

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